

getteally prosecute the work of organization, and to consider ways and means for working upon the physicians residing in counties where there are County Societies, yet who remain non-members of such organizations. The time is here; the work is ready and waiting; our duty is writ plain for every man to read; let us then be cowards no longer; let us turn to the work and do it; let us take that place in the affairs of State and Nation which it is essential we should take.

(Concluded on page 163.)

ADDRESS IN MEDICINE AT THE THIRTY-FOURTH ANNUAL MEETING OF THE STATE SOCIETY, 1904.

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THE honor of having been chosen to deliver an Address in Medicine before this august assemblage of thinkers is a very great one, and I hope that I may not do discredit to the choice of our very worthy president in calling upon myself to fulfill the duty.

I deeply appreciate this mark of his esteem, but fear that my effort may be disappointing to him, and to the members of this Society. I feel that a man chosen from out the members of the profession in one of our larger cities, where the wealth of clinical material is great, and the field for original work is beyond anything at my command, could have given you something of greater interest than I can offer. All that I will do will be to present some old thoughts, clad in new language, that may arrest your attention, and possibly arouse your interest. This I will promise you, and methinks I can already hear the sigh of relief that will punctuate this statement: I will not bore you with a long address. I will not give you a rehash of medical news, or a review of the progress of medicine during the year that has passed since our last meeting. I will not discourse upon the new wizard-metal, radium, that has overturned the very foundation stone of chemistry—the atomic theory—which has proved that the old philosophers' dream of the possibility of transmutation of metals is after all no dream, but a fact; which has opened up a new field for scientific medical research, and has added another great remedial weapon to our armamentarium. I will give you none of these, but will go back and pluck the sword of Preventive Medicine from the dead hand of the Israelite, Moses, the great law-giver and physician of ancient days. We have no better method for the prevention for the spread of leprosy today than the one laid out by Moses, many thousand years ago. Where can you get a better system of camp sanitation than the one promulgated by the same wise ancient for use by the children of Israel whilst traveling through the wilderness? It is because these ancient camp rules are not observed in our modern military, and other camps, that typhoid fever and other filth diseases prevail today. Let me then review the field of preventive medicine, and if I cannot add a single new thought to those already accumulated, (although I hope to do so), it may serve to remind you of some known but neglected methods for the prevention of disease.

How ennobling is the thought that the physician alone, among all professional men, labors night and day to lessen his own gains. At the expense of his own often too meagerly filled pocket, he is constantly reminding and teaching the layman how to prevent the ailments of himself and his little ones. The physician is the first to fly to the rescue when an epidemic threatens. He stirs and awakens the apathetic

public, and forces it to spend its hoarded dollars for prevention instead of cure.

Since the days of Hippocrates, despite the crudities of medicine then taught, practiced and believed in, the higher duties owed to his profession have been recognized by the medical man. Bacon has said: "I hold every man a debtor to his profession; from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereto." Some few, from greed of worldly gain, may not live up to this standard, but I believe the number to be exceedingly small. The physician, above all other professional men, lives up to the highest ideals, and I believe the country practitioner leads in unselfish effort. The stress and strife of city life, the selfishness and greed of great communities, the striving for position and prestige, blunt the impulses for good in the city practitioner's heart, and lessen his efforts for the public good and the higher interests of his profession. In every country community the physician is looked up to as belonging to an educated profession that renders him more cultured and refined. His words are listened to with respect, and his professional utterances accorded serious and thoughtful consideration. And further, the country practitioner, from the nature of his calling and environment and his need of self-reliance, becomes a close observer and a ready interpreter of his observations. He learns to reason rapidly, and to act quickly. He becomes intimately acquainted with men and motives, and can sway his community more powerfully than can his city brother. See how utterly impotent were the recent efforts of the best medical men in San Francisco against the selfish commercial interests of the public in that city, when trying to defend the place against plague. How different would it have been had a case developed in a small community. Had the respected physician there pronounced a case as plague, the last dollar in the place would have been pledged to properly quarantine the affected premises and prevent the spread of the disease. Further, the physician, better than any other man (possibly excepting the lawyer), becomes better acquainted with his fellow-citizens, attains a deeper knowledge of human nature, and is thereby better qualified, even outside of his medical education, to understand the requirements of a community; whilst his medical and scientific attainments make him an unequalled adviser on questions of public health and sanitation, water supply, plumbing, draining, sewerage, ventilation, schoolhouse construction, etc. He exerts his knowledge to the benefit of the public, and the honor of his profession; but not to his own pecuniary betterment.

As medical knowledge and scientific attainment have increased, the communal value of the physician, the morale of the profession has improved and its conscience has become more strenuous. The young man starting out on his career inherits from his professional forebears many privileges not accorded the layman, and he also inherits correspondingly great duties. It is this unearned inheritance which places the young physician, in the very springtime of his work, under such deep obligation to his profession. Ever solicitous for its good name, he sinks self and works for the public good; or, ignoring his great debt, works but for himself, and sinks to the level of the money-grubber.

I think I am correct when I make the statement that in our entire country there is not a single law upon any of our statute books, that has ever been passed at the instigation of the medical profession, that is not productive of more good to the masses of the people than to the profession itself.

The physician's whole life is but the history of his

accomplishments and endeavors. He starts out full of ambition, high ideals and roseate dreams, and at the end, when the icy hand of Time has pressed upon his head and turned his locks to snow, his dearest possession is the respect of the members of his own profession. Therefore do I appeal to you all to be the more zealous in the prevention of disease, and thus carry on the good work handed on to us by our professional fathers.

Preventive medicine, like all other branches of our art, is making marked advances and keeps fully in step with modern progress. The war upon mosquitoes and rats, for the better protection of the people against malarial diseases and plague, is of recent origin, but has already proved of inestimable benefit. As yet the mass of the profession has not entered into the earnest efforts that should be made against the mosquito. Those living in a malarial district should constantly urge the necessity of warfare against the pest. Thorough drainage of wet lands is the greatest preventive, as it strikes at the very root of the matter. Next comes protection from the bites of the insects, when they cannot be entirely destroyed. A patient suffering from active malarial infection should be carefully guarded by impervious mosquito netting, lest in this stage he be bitten by the Anopheles and thus become a source of infection to all whom the mosquito may subsequently bite. I believe any person suffering from active malarial poisoning should be as jealously guarded as a smallpox patient. He is equally as dangerous to the others around him. Wherever mosquitoes exist, no matter how small their number, great pains should be taken to exclude them from sleeping chambers and, as far as possible, from the whole dwelling. No matter if their numbers are so inconsiderable as to cause little discomfort from their bites; their very presence renders every effort to avoid their sting warrantable. Wherever the Anopheles is known to exist, netting around the beds of the sleeping is required.

The common house-fly, *Musca domestica*, has been convicted for the spread of trachoma and typhoid fever, and is under indictment for other crimes. I wish to add my testimony against the suspected criminal for the spread of diphtheria and scarlatina. You all know how eagerly the house-fly attacks the secretions of the mouth and nose in these diseases. It needs the most constant and watchful care of the nurse to keep them from the patient. We know that diphtheria appears in the homes of the rich and poor alike; in the palace and the hovel; where the plumbing and sanitation is perfect, and where neither exist; and where no known means of communication can be traced. I believe that an experience of my own might possibly explain the source of infection as coming through the house-fly. In June, 1903, I was called into the country five miles from town, to see a child four years of age, son of a farmer occupying a home well isolated from all neighbors, and with good sanitary surroundings. I found the patient suffering from a severe attack of diphtheria, of over twenty-four hours' standing. Diphtheria antitoxin was administered, and the next morning was given again. I then began an investigation as to the source of the disease. The father and his household, including three farm servants, had been at home without contact with the outer world for a period of two weeks, and the child and an elder sister, the only children on the farm, had not been off the place for the last six weeks. The father had been busy harvesting several hundred acres of hay, hence the lack of contact with the outside world. No discernible reason could be discovered why the disease should have appeared in the place. The child was completely isolated from the rest of the family, but no screens were put upon the

windows. In one week the sister showed membrane in the throat, but one administration of anti-toxin aborted the disease. Soon afterward I learned that diphtheria had existed for several weeks previously in a large family of children some two or three miles away, on the banks of the same small stream that flowed past the home of my patient. The prevailing winds at that time of the year came directly up the stream from the first infected home, and I have no doubt that flies bearing the specific germs, drifted up the ravine, under the impulse of the winds, and carried the contagium. I also believe that the flies were the cause of the second case, as the child and its nurse were completely isolated from contact with the other members of the family.

The following month I was called in consultation with a physician in a town some miles away, to see two severe cases of diphtheria in the children of a family which had just lost a member from the same cause. I found the house unscreened, and the flies holding high carnival around the sick beds. An adjoining house on one side was unscreened, and cases appeared in it later. On the other side was a well screened dwelling, in which were four small children, none of whom were affected; whilst in the next, an unscreened home, three of the family had the disease. Pardon the relation of this personal experience; I give it in hope that it may lead some of you to give the subject personal investigation. In scarlatina, if the insect does not carry the specific poison, it does carry the secondary or streptococcic infection, and should be as carefully guarded against as in diphtheria. That flies carry the contagium of typhoid fever is now universally granted; but are you all fully awake to the fact, and do you take measures against them accordingly? If not, you should be; and should have your typhoid patients, and all their excretions, carefully guarded against these pests.

This leads me to speak of typhoid and its prevention. Do we live up to the scientific knowledge of our day in this disease? It seems not, for out of every one hundred cases sent to our division hospitals in the Spanish-American war, one-half had escaped the diagnosis by the regimental surgeons. It would seem from this that our American medical schools have been doing some poor work in education. Surely no one will accuse the American mind of being too dull to learn to diagnose correctly. What then is the trouble? I believe it to consist in bowing too much to authority. Instead of following natural methods of study, our medical teachers adhere to the old classical descriptions of typical cases of typhoid, when the fact is that a typical case is the rare exception, and not the rule. Typhoid is taught too much and studied too little, and when the unfortunate student graduates, he is in the position very graphically described by one of our American humorists—"He knows too darned much that ain't so." Drop your dogmatic teaching, gentlemen, and go to Nature. And again, I consider it a disgrace to our eminent bacteriologists in our great universities to have had such outbreaks of typhoid as have characterized their histories during the late past all over our nation. Surely these men, many with reputations outside their universities, should be able to detect the bacillus of Eberth in the water or milk supply, before any case of fever arises, and take measures accordingly.

All physicians should, in a doubtful case of fever, depend upon the microscope, for all other symptoms fail. The serum reaction of Widal is fairly reliable, but unfortunately is seldom demonstrable in the early stages of typhoid; whereas, the presence of bacillus typhosus can be detected from the first in any fairly equipped laboratory. Of course, where the physician is without the proper equipment, and both

he and the patient are pecuniarily unable to procure a bacteriological report, bad results will ensue. I will have something to say for the correction of this state of affairs at the end of this address.

Once the presence of typhoid is demonstrated, in family, village, town or city, the prevention of further infection becomes the bounden duty of the medical man. Let no sense of modesty or hesitation stand in the way; the doctor must throw himself into the breach in the levee, and endeavor to stop the rushing tide.

Another class of our patients are not as well protected against preventible ills as they should be: I allude to the pregnant woman. How often does the physician go to the bedside of the woman in labor without ever seeing her throughout her term of pregnancy? This must happen at times through force of circumstances, but need not happen in thousands of instances where it occurs. Generally the husband of the pregnant woman engages the services of the obstetrician, telling him when his services will be required, and going away with the promise of attendance at the needed time; and that ends the matter, until the specified period has elapsed. If the woman is a primipara, and a stranger, what may the physician find? Nay, what may he *not* find, that it was his duty to know long ago? Nephritis, plevic deformities, tumors, too much adipose tissue, and many other ills that called for attention months previously. Never go to a case of obstetrics in the dark as to conditions, when you know that it is coming. Insist upon a previous examination, and see if there be any constitutional, mechanical, or other reason why your patient should not, or cannot bear children, and whether or no there be conditions of health upon which she needs advice. Instruct her as to the care of her health, and how to detect the first signs of impending kidney affection; the care of her breasts; the proper sterilization of her bedding, and all articles that may be used about her at the time of her confinement; and inform her upon all points that the modern obstetrician knows to be necessary. Never take it for granted that the patient has read some household, or other half-baked work on how the pregnant woman should care for herself, because the woman who follows such advice is in poor hands, and more than likely to go wrong. After her delivery, in every case, advise her as to her diet, the care of her breasts so as to avoid mastitis, sore nipples, etc., and do not leave all to the direction of a careless nurse. In fact, be to her what you should be, her "very great comfort in her time of trouble."

To all your patients be never weary in preaching the necessity of asepsis in all wounds, so as to prevent infection, and septicemia. Teach them, in season and out of season, to avoid the use of patent and proprietary medicines, and other nostrums. Thousands acquire drug habits through the use of those containing opium in some of its many forms, cocaine or chloral; whilst many other thousands die from the use of the many headache remedies now upon the market, all containing dangerous amounts of acetanilid and other coal tar products, not to mention other fatal drugs.

Teach the tuberculous patient what he should know. Impress upon him, or her, the necessity of coughing into a handkerchief that thoroughly covers the face; never to spit into anything excepting a proper sputum receptacle; the thorough disinfection of whatever is soiled by the sputum; to keep the hands and face carefully disinfected; to avoid kissing. Teach all these things for the safety of friends and attendants, besides giving advice for the patient's own good.

And I would ask the profession, as one man, to rise up in condemnation of the railway sleeping coach. Radical changes are needed in these to make them

clean and wholesome. Consumptives are continually *in transitu* between all points in the country, but especially is California full of them. Our climate is an attraction to this class of invalids, and all travelers on our railways are in danger. In the sleeping cars we are shut up in a stuffy berth with cushions and blankets that have borne and covered hundreds of tuberculous people without adequate disinfection. Nothing should be used in these coaches that cannot be readily taken apart and thoroughly cleansed; and all woolen material should be abolished, excepting the blankets, and they should be disinfected after every trip.

In conclusion, I would urge upon the medical men of the State that they unite and advocate to the people at large, and especially to our Legislators, the need of establishing a State laboratory for bacteriological and allied purposes. It is said that the average annual income of the members of the medical profession in the United States is about \$700. The average in this State is probably higher—but none too high. If this be so, how many men in the rank and file of the profession can afford microscopes, and other costly equipments for laboratory work? The graduate is educated for the work by our medical schools, but for want of the necessary means at the outset of his career, cannot equip himself properly and has to do without the costly instruments that he needs. After a time the habit of doing without them is formed, and when the time comes that he is able to procure them, the desire to do so has passed away and he does as he has done before—goes without them. Again, how can the busy country practitioner, exhausted with bodily and mental fatigue, crowded with exacting work, and without assistance, gain time to do bacteriological work? He cannot do it, and so it goes undone. In malarial sections of our State the busy man will each day prescribe for and visit from five to thirty patients, in the latter part of summer, supposedly suffering from malarial disorders of various character. I ask you in all seriousness, can he investigate the true cause of ailment in all of these cases? And yet he is supposed to do so, and gets so accustomed to the symptoms by constant familiarity with them, that he seldom fails in making a correct diagnosis. But he meets a case occasionally that he is doubtful about, but from sheer weariness, or lack of equipment, or, mayhap, ignorance of methods he fails to call upon the assistance of the microscope, and serious harm results.

Many country practitioners—yes, and city practitioners also—would like to have laboratory work done, when from the poverty of the patient, and his own shortness of funds, the fee of the bacteriologist stands in the way. For these many reasons, I appeal for a State laboratory. The expense to the people of the State would be trivial, and the benefit at times inestimable. We have the honor of having a member of our profession in the gubernatorial chair at the present time, and could depend upon him to aid such a project with all his power. Consider what this would do for the good of the people, first, and the physician, last. The doubtful case is met, a specimen of blood, sputum, secretion, tissues, etc., is secured and sent to the State laboratory, and a report promptly received. Gentlemen, if we had such a department of our State government, thousands of mistakes in diagnosis could be avoided, deaths prevented, and epidemics curbed in their incipency. Examination of water and food supplies would in many instances stop epidemics that now attain dangerous proportions before proper steps can be taken to stop them. Some states of our Union have already adopted the plan of State laboratories, and California should not be in the rear in adopting modern scientific plans for the protection and safeguarding of its citizens.